**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT,	§ § §	
	§	CIVIL ACTION No. 6:20-CV-533-ADA
Plaintiff,	§	CIVIL ACTION No. 6:20-CV-535-ADA
	§	CIVIL ACTION No. 6:20-CV-540-ADA
v.	§	CIVIL ACTION No. 6:20-CV-543-ADA
	§	
HUAWEI TECHNOLOGIES USA INC., *et al.*,	§ §	
	§	
Defendants.	§ §	

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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Pursuant to the deadline set forth in the Scheduling Order (Dkt. 34), and the guidelines regarding claim construction set forth in the Order Governing Proceedings in Patent Cases ("OGP") (Version 3.2), Defendants Huawei Technologies USA Inc., *et al.*, (collectively, "Huawei") respectfully submit this Responsive Claim Construction Brief to Plaintiff's ("WSOU's") Opening Claim Construction Brief ("Opening Brief") (*See, e.g.*, -00540, Dkt. 43).[1]

I.   U.S. Patent No. 6,882,627 ("'627 Patent") (Case No. 6:20-cv-00533)

A.   "performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology that discourages the use of network resources" (claims 1, 29, 30)

Huawei's Proposed Construction	WSOU's Proposed Construction
"performing a transformation of links and/or nodes of a SRG (shared risk group) of the network into a virtual topology that discourages the use of network resources"	Plain and ordinary meaning

The parties dispute whether the phrase "performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology that discourages the use of network resources," has only one ordinary meaning and thus is self-defining, and accordingly should be given its "plain and ordinary meaning," as WSOU contends. It is not, and thus a construction of "plain and ordinary meaning is not appropriate." *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008) ("[a] determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary meaning' or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute."). Further, the term "SRG (shared risk group) topology transformation" is not

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[1]   This Brief addresses the disputed claim terms (that the parties were collectively permitted to present to the Court for resolution pursuant to the OGP (Version 3.2)) for Case Nos. 6:20-cv-00533, -00535, -00540, and -00543.

one that would be commonly understood by the jury, and thus further supports the need for a construction. *Fenner Investments, Ltd. v. Cellco Partnership*, 778 F.3d 1320, 1323 (Fed. Cir. 2015) ("When the disputed words describe technology, the terse usage of patent claims often requires 'construction' in order to define and establish the legal right.")

The dispute between the parties centers on whether the "topology transformation" is a transformation of "links and/or nodes" as specified in Huawei's proposed construction. The definitions, figures, and text of the specification indicate that it is. While WSOU is correct that the specification states obliquely that "network resources … might" include nodes and links (Op. Br. at 4), this inconclusive reference does not contradict the point that "link and/or nodes" are the only things that make up a network topology transformation. *See, e.g.,* '627 Patent, 6:49-7:52 (describing "Link Transformation" and "Node Transformation" as "Topology Transformation"). At no point does the specification contemplate or describe an SRG topology transformation on other objects other than the links and nodes. Indeed, construing the instant claims to encompass that subject matter would likely render the claims invalid for lack of written description. *See Gentry Gallery, Inc. v. Berkline Corp.,* 134 F.3d 1473, 1480 (Fed. Cir. 1998) (holding that a claim "may be no broader than the supporting disclosure"); s*ee also Ruckus Wireless, Inc. v. Innovative Wireless Solutions,* 824 F.3d 999, 1004 (Fed. Cir. 2016).

This is not surprising given that, at its heart, a network topology is a representation of a network ***through nodes and links*** – indeed the entire point of a topology is geometric mapping to understand the network. *See, e.g.,* '627 Patent, 1:13-25 ("As is known in the art, a network includes a set of ***processing sites generally referred to as stations or nodes*** connected by one or more physical and/or ***logical connections generally referred to as links***, which may be unidirectional

or bi-directional in nature. …   The nodes may be coupled together in a variety of different network structures typically referred to as network topologies.") (emphasis added).

WSOU's argument that Huawei's proposed construction excludes embodiments is belied by the statements and definitions set forth in the specification, which consistently show topologies comprising nodes and links. *See id.*, Figs. 1, 3A-D. In addition, the specification makes clear that the groups of links and/or nodes are what "share a common risk of failure" and thus underlie the claimed "shared risk groups." For example, the '627 Patent states:

> ***Some links and/or nodes in a network may share common risk of failure.*** For example, there may be multiple links at which some point share a common resource such as a common single cable. Such links would simultaneously fail in the event of the failure of the common resource. ***Groups of network resources which share common risks are referred to herein as "shared risk groups" or SRGs***.

Id., 1:58-64 (emphasis added). These statements, taken in combination, demonstrate that the SRGs that are transformed consist of some combination of nodes and/or links, but not other undefined network resources.

As such, contrary to WSOU's contention, this is not a question of limiting the claims to a particular preferred embodiment, but rather construing the claims consistent with the scope of what is disclosed in the written description. *See On Demand Machine Corp. v. Ingram Industries, Inc.*, 442 F.3d 1331, 1340 (Fed. Cir. 2006) ("[T]he role of the specification is to describe and enable the invention. In turn, the claims cannot be of broader scope than the invention that is set forth in the specification."). Huawei's proposed construction properly accounts for the scope of the alleged invention set forth in the '627 Patent and provides clarity as to the nature of the "SRG topology transformation," and, as such, should be adopted by the Court.

B.   **"second code means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources" (claim 29)**

"means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources" (claim 30) [2]

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: processing platform readable medium, and equivalents thereof (claim 29) / a network management platform, and equivalents thereof (claim 30) Algorithm (if required): *see, e.g.,* 2:13-54, 3:54-4:15, 4:45-5:33, 6:23-37, 6:52-7:52, 9:18-12, 12:46-50, Figs. 3A, 3B, 6B, and equivalents thereof

The parties agree that these terms are means-plus-function terms governed by 35 U.S.C. § 112, ¶ 6, and that the claimed function is to "determine if any of the at least one shared risk group includes any of the first sequence of network resources."[3] The parties disagree, however, whether there is corresponding structure disclosed in the specification of the '627 Patent that is clearly linked to and accomplishes the agreed-to function. As a result, the Court must ascertain whether there is a corresponding structure disclosed in the '627 Patent's specification that corresponds to the claimed function. *See Williamson v. Citrix Online, LLC,* 792 F.3d 1339, 1352 (Fed. Cir. 2015) (*en banc*). The "structure disclosed in the specification is 'corresponding' structure only if the

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[2]   WSOU identifies three means-plus-function terms on page 3 of its Opening Brief and contends that those are terms with "Constructions Not Contested by Defendants." While Defendants chose not to brief those terms given the limits imposed by the Court and OGP 3.2, Defendants contend that WSOU's identification of structure is incorrect.

[3]   Contrary to WSOU's contention, Huawei does not dispute the function for this term (*see* Opening Brief, at 5), Huawei only disputes that there is sufficient disclosure of corresponding structure.

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specification or prosecution history clearly links or associates that structure to the function recited in the claim." *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997).

Because there is no structural component or corresponding algorithm disclosed in the specification that is clearly linked to and accomplishes the claimed function above, claims 29 and 30 of the '627 Patent are indefinite, and therefore invalid. *See* Ex. 2, Lavian Declaration, at ¶¶ 54-73; s*ee also Williamson*, 792 F.3d at 1351-52.   WSOU's contention that the corresponding structure is the structure identified in the *preamble* of claims 29 and 30 creates redundancies in the claim language and is contrary to the case law. *See* Ex. 2, Lavian Declaration, at ¶ 58; *see also, e.g., Net MoneyIn, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1366 (Fed. Cir. 2008) (holding that the term "bank computer" in the phrase "bank computer including" does not constitute sufficient structure because it "would require the first bank computer to include a first bank computer, which is both redundant and illogical. Because the claimed generating means is a subset of the bank computer, there must be a recitation of structure that is a component of the bank computer.").

Specifically, if the Court were to adopt the "processing platform readable medium" as the corresponding structure in claim 29, then the claim would require the "processing platform readable medium" itself to further include a "processing platform readable medium." *See, e.g.,* '627 Patent, claim 29 ("*A processing platform readable-medium* . . . *the medium comprising* . . . second code means adapted to determine if any of the at least one shared risk group includes any of the first sequence of network resources.") (emphasis added). The same would hold true for the "network management platform" of claim 30. *Id.,* claim 30 ("*A network management platform comprising* . . . means adapted to, for at least one shared risk group, determine if any of the at least one shared risk group includes any of the first sequence of network resources.") (emphasis added).

Construing means-plus-function terms in such a manner is improper and in contravention

of long-established Federal Circuit precedent. *See Net MoneyIn, Inc.*, 545 F.3d at 1366. Moreover, even if the "processing platform readable-medium" or "network management platform" were available to be considered as structural support, each of those terms equates to nothing more than a general purpose computer, which itself generally cannot serve as corresponding structure. *See Williamson*, 792 F.3d at 1352 ("[T]his court has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor."); *Rain Computer, Inc. v. Samsung Elecs. Co., Ltd.*, Case No. 20-1646, Dkt. No. 45 at 8-9 (Fed. Cir. Mar. 2, 2021) (finding that "computer-readable media or storage devices amount to nothing more than a general-purpose computer" and that as a result disclosure of an algorithm is required).[4] This further supports that the specification must disclose a specific algorithm for performing the claimed function. *See Net MoneyIN, Inc.*, 545 F.3d at 1367.

WSOU's first response to this problem is that it does not need to disclose an algorithm because the functions described are "common" ones that do not require the disclosure of an algorithm. *See* Opening Brief, at 6 (citing *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1315-16 (Fed. Cir. 2011)). However, the Federal Circuit has emphasized that the *Katz* exception is "narrow," and it is "[i]t is only in the rare circumstances where any general-purpose computer without any special programming can perform the function that an algorithm need not be disclosed." *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1364-65 (Fed. Cir. 2012) (finding that "**[t]*he* '*control means*'** at issue in this case cannot be performed by a general-

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[4]   For example, the only reference to a "processing platform readable medium" in the specification is anything "specific or nonspecific, to implement any of the methods described herein" ('627 Patent, 3:19-23), and the only reference to a "network management platform" is "adapted to implement any of the methods described herein," and "would include any suitable combination of hardware and/or software." *Id.*, 3:24-27. These are the descriptions of a general purpose computer, not an independent structural element that one of the ordinary skill would understand to be clearly linked to the claimed function.

purpose computer without any special programming. The function of 'controlling the adjusting means' requires more than merely plugging in a general purpose computer") (emphasis added). Importantly, a general purpose computer without special programming could not "determine if any of the at least one shared risk group includes any of the first sequence of network resources," much less understand what a "shared risk group" even is. Software to analyze and consider network resources is the definition of "special purpose" software that requires algorithmic definition.

WSOU's second response to this lack of algorithmic support is to summarily argue that "the claim language itself provides all the algorithm that is required." Opening Brief, at 6. WSOU provides no support for this contention, and the claim itself recites no such algorithm. Instead, the claims summarily and circularly state that "a shared risk group being a group of network resources within the network topology which have a shared risk." *See* Ex. 2, Lavian Declaration, at ¶¶ 55-61; *see also* '627 Patent, claims 29 and 30.   There is no further discussion as to how, algorithmically, one should "determine if any of the at least one shared risk group includes any of the first sequence of network resources."

WSOU's final response is to point to extensive "exemplary" block cites and figures. Opening Brief, at 6. In doing so, WSOU is effectively asking the Court to guess as to what WSOU contends the corresponding structure(s) should be by citing to nearly the entire patent. Notwithstanding the fact that this guessing game is wholly improper, none of the specification sections or figures cited by WSOU actually identify corresponding structures that are clearly linked to the claimed functions. *See* Ex. 2, Lavian Declaration, at ¶¶ 62-72. WSOU highlights one solitary "example" for the Court at 6:23-37 (Opening Brief, at 6), and tellingly it does not disclose the claimed function at all, instead describing the labeled shared risk group 50, 52 and 54 based on the network topology 3A, and stating that it is "assumed" that there are those certain risk groups.

See id. at ¶ 67. WSOU's only highlighted passage does not disclose the specific implementation of how to determine if any of the at least one shared risk group includes any of the first sequence of network resources in the first path through the network topology as claimed. WSOU thus provides no specific algorithmic support as required.

Given that there is no clear link to any structural component or algorithm in the specification for performing the claimed function, claims 29 and 30 of the '627 Patent are indefinite and therefore invalid.

C. **"third code means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources" (claim 29)**

"means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources" (claim 30)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: A processing platform-readable medium comprising algorithms for link and node transformation such as those disclosed in Figures 3C, 3D, 4A, and 4B and the corresponding embodiments disclosed in 6:49-7:52, and equivalents thereof (claim 29) A network management platform comprising algorithms for link and node transformation such as those disclosed in Figures 3C, 3D, 4A, and 4B, and the corresponding embodiments disclosed in 6:49-7:52, and equivalents thereof (claim 30)[5]	Subject to 35 U.S.C. § 112, ¶ 6 Structure: processing platform readable medium, and equivalents thereof (claim 29) / a network management platform, and equivalents thereof (claim 30) Algorithm (if required): *see, e.g.,* 2:13-3:18, 6:49-7:52, 7:63-8:28, 8:30-9:35, Figs. 2, 3A-3D, 4A, 4B, 5A, 5B, 6A-6E, and equivalents thereof

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[5] Huawei has added the text from 6:49-7:52, which corresponds to these Figures and makes the corresponding structure clearer.

Similar to the terms in Section B above, Huawei and WSOU agree that these means-plus-function terms are governed by 35 U.S.C. § 112, ¶ 6, and that the function is "performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources." While the parties agree that there is a "corresponding" structure disclosed in the specification that is clearly linked to and can accomplish the claimed function, the parties dispute which structures those properly are.

For the reasons explained in Section B above, WSOU's identification of structure from the claim preambles is legally improper and would create redundancies in claims 29 and 30. *See, e.g.,* '627 Patent, claim 29 ("A ***processing platform-readable medium*** . . . ***comprising*** . . . third code means for performing a SRG (shared risk group) topology transformation of the network topology into a virtual topology which discourages the use of network resources.") (emphasis added).[6] And WSOU's backup, "if required" algorithm recites broad sections of the entire specification as opposed to identifying specific corresponding structure. Huawei's proposed construction, to the contrary, includes the algorithms the specification of the '627 Patent discloses as necessary to perform a SRG topology transformation of the network topology into a virtual topology – namely the algorithms disclosed in Figures 3C, 3D, 4A and 4B and the corresponding embodiments disclosed in 6:49-7:52.[7]

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[6] Notably, WSOU identifies the *same* alleged structure for *both* this term and the previous term, indicating this is not actually supporting structure for either particular function, but instead a general-purpose computer alleged to perform the method on the whole.

[7] Importantly, the algorithms in Figures 3C, 3D, 4A, and 4B are the only algorithms disclosed that can perform a SRG topology transformation. In such a case, where the specification clearly links structures from only a single embodiment, then any means-plus-function claim will be limited to those structures. *See Mettler-Toledo, Inc. v. B-Tek Scales, LLC,* 671 F.3d 1291, 1296 (Fed. Cir. 2012).

The high-level step of performing a topology transformation is disclosed in step 2-4 of the SRG-Constrained Routing Algorithm. *See id.*, 6:49-51 ("Create a Transformed Topology in which the Resources of Each Shared Risk Group Including a Resource in the Primary Path Are Transformed – Topology Transformation."). Step 2-4 explains that the transformation of links is described in Figures 4A and 4B. *See id.*, 6:63-64 ("A preferred method of performing link transformation will be described with reference to FIG. 4A"). The transformation of nodes is explained in Figure 4B. *See id.*, 7:11-12 ("A preferred method of performing node transformation will be described with reference to FIG. 4B"). Figures 3C and 3D serve to provide an understanding of the end result of the transformation process and how the network links and nodes appear after the transformation has taken place. *See id.*, 7:40-52. As such, Figures 3C, 3D, 4A, and 4B and the corresponding descriptions collectively provide a representation to one of ordinary skill in the art how to perform the claimed topology transformation and, as such, are the structural components that are necessary to perform the claimed function.

In contrast, WSOU's citation to the general purpose computers listed in the preamble of its claim is improper, and WSOU fails to clearly link the shotgun-blast citation to the entire patent as an "if required" algorithm to the claimed function. For example, the '627 Patent at 2:31-3:18 provides a summary of the invention describing the overall method of the invention, as opposed to a specific algorithm, 7:63-8:28 speaks to the separate process for determining "necessary and unnecessary common links" in an already transformed topology, and 8:30-9:35 describes a separate process of maintaining node disjointedness. To the contrary, Huawei's identification of 6:49-7:52 specifically describes "Creat[ing] a Transformed Topology … Topology Transformation." Huawei's proposal is thus the proper "corresponding structures" pursuant to 35 U.S.C. § 112, ¶ 6, and should be adopted by the Court.

II.   U.S. Patent No. 6,999,727 ("the '727 Patent") (Case No. 6:20-cv-00543)

A.   "a number of corrected errors (BCE) in a non-SCS base reference time period" (claims 1, 4-7) [8]

Huawei's Proposed Construction	WSOU's Proposed Construction
"the number of background corrected errors that have been corrected within a base reference time period which is different than the base reference time period used to detect uncorrected blocks"	Plain and ordinary meaning

Huawei's proposed construction of this term (1) holds WSOU to statements made in the prosecution history by the patent applicants clarifying that the portion of the claims that recite a "non-SCS base reference time period" refers to a time period different than the time period used to detect uncorrected blocks, and (2) clarifies the definition of the term "corrected errors," which is subsumed within the term "BCE" (or "background corrected errors") present in all of the asserted claims and used throughout the formulas and examples in the specification of the '727 Patent.

As to the first part of Huawei's proposed construction, the only time the letters "BCE" are used within the specification of the '727 Patent is when the definition of "background corrected errors" is provided. *See* '727 Patent, 3:8-11 ("BCE: background corrected errors: it is the number of CE [corrected errors] that are corrected in a 'non SCS' second …"). WSOU appears to have no issue with the inclusion of this definition in Huawei's proposed construction (other than the fact that WSOU does not believe this term needs to be construed at all).

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[8]   Huawei previously proposed that the term "corrected errors" should also be construed. However, after further consideration, the clarification of the term "corrected errors" is best addressed in this claim term.

Next, Huawei's construction that "corrected errors" are those that "have been corrected" is fully supported by the intrinsic record. The term "corrected errors" is expressly defined by the specification. *See id*., 2:48-51 ("corrected errors: number of errors (CE) that are corrected by the FEC mechanism in the time interval considered …"). Huawei's proposed construction is thus in line with this lexicographic definition from the specification with the one minor exception – Huawei's proposed construction clarifies that it is the calculation of errors that "have been corrected." *See, e.g.*, *id*., 1:63-2:3 (stating that "the object of the present invention is to overcome the above said problems and to indicate a method for implementing a Performance Monitoring PM function according to data that are retrieved through FEC, in a telecom network, which is based upon the correlation of information relating to '*corrected*' and 'uncorrected' information blocks deriving from the implementation of the FEC function.") (emphasis added). This sentence explains that the Performance Monitoring PM function is implemented based on the information blocks derived from the FEC function, or put another way, from the output of the FEC function. *See id.*, 2:4-9 ("Therefore, the basic idea is that it is possible to have a better indication on the status of path (link) through the implementation of the PM function based upon the correlation of the information regarding 'corrected' and 'uncorrected' information blocks *deriving from the implementation of the FEC function*.") (emphasis added). Thus, the "corrected" errors are errors that have been corrected.

Huawei's slight modification of the definition set forth in the specification of the '727 Patent is supported by the plain meaning of the phrase itself, as the term "corrected" is used in the past rather than the present tense. Huawei's proposed construction is thus consistent with the definition provided by the specification and with the plain claim language – i.e., that corrected blocks are blocks that "have been corrected." *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1316

(Fed. Cir. 2005) (*en banc*) (finding that when the patentee chooses to give a term a special definition, that lexicography governs).

Finally, Huawei's distinction regarding the SCS and non-SCS time periods comes from the definitions provided in the specification and from statements made during prosecution. Specifically, the specification explicitly defines an SCS base reference time period. *See* '727 Patent, 3:12-15 ("SCS: severely corrected second: it is either a defect second DS or a second wherein at least one uncorrected block UB has been detected (or both the conditions).") In addition, the specification explains that when calculating the "first data item of PM," the summation of the SCS time intervals is what allows the calculation of uncorrected blocks. *See id*., 3:25-29 ("Therefore, from the BER_{IN} formula, it is possible to see the correlation existing between the information regarding the corrected blocks ($\sum BCE$) and the uncorrected blocks ($\sum SCS$)").

Further, during prosecution, the patent applicants distinguished the Cooper prior art reference (U.S. 6,772,388) by clarifying that the same size window (i.e., SCS time period) and non-same window size (i.e., non-SCS time period) were separate and distinct. *See* Ex. 1, "Appl. Ser. No. 10/219,343, 06/10/2005 Amendment," at 6 (distinguishing Cooper because "the steps beginning at step 202 through the last step in Fig. 2 are all based on the *same* sample window size in Cooper. In Cooper, there is no correlation between a sample window size (time period) and a non-sample window size (different time period), for uncorrected and corrected blocks, respectively.").

In combination, these definitions and disclosures make clear to one of ordinary skill that the SCS second is used to calculate the total number of uncorrected blocks. Moreover, the SCS second is clearly different than the **non**-SCS second, as the prefix "non" in the English language means "not." *See, e.g.,* Merriam-Webster Online Dictionary, https://www.merriam-

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webster.com/dictionary/non- ("non" defined as "not; other than; reverse of; absence of"). As such,

the proper interpretation of this claim term is "the number of background corrected errors within

a base reference time period, which is different than the base reference time period used to

calculate uncorrected blocks."   Because Huawei's proposed construction is in line with the

lexicographic definitions from the specification and the statements in the prosecution history, it

should be adopted by the Court.[9]

B.   "means for implementing a Performance Monitoring function based on data retrieved through a Forward Error Correction function" (claims 4, 5)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Structure: Algorithm disclosed in Figure 1, and equivalents thereof	Subject to 35 U.S.C. § 112, ¶ 6 Structure: telecommunication network management system, and equivalents thereof; Algorithm (if required) *see e.g.*, 1:63-2:21, 2:36-4:54, Fig. 1

The parties agree that this term is governed by 35 U.S.C. § 112, ¶ 6, and that the function

is "implementing a Performance Monitoring function based on data retrieved through a Forward

Error Correction function."   While the parties agree that there is a corresponding structure

disclosed in the specification that is clearly linked to and can accomplish the claimed function, the

parties disagree about what that structure is.

For the reasons explained above with regard to the '627 Patent (*see*'627 Patent, Section B,

supra), WSOU's identification of the "telecommunication network management system" from the

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[9]   Notably, Huawei has altered its proposed construction to clarify that the SCS base reference period is the period used to *detect* uncorrected blocks, as defined by the '727 Patent (*see* 3:12-15). Accordingly, Huawei believes that WSOU's dispute as to that portion of Huawei's construction is now resolved

preambles of claims 4 and 5 is legally improper and would create redundancies in those claims. *See, e.g.,* '727 Patent, claim 4 ("A ***management system of a telecommunication network, comprising*** . . . means for implementing …") (emphasis added). Construing means-plus-function terms in such a manner is improper and in contravention of long-established Federal Circuit precedent. *See Net MoneyIn, Inc.*, 545 F.3d at 1366.

Moreover, the term "telecommunication network management system" is not defined within the specification,[10] is not defined by any extrinsic evidence cited by WSOU, and WSOU does not claim that the term has a generally understood meaning in the art. The end result is thus that the term "telecommunication network management system" is akin to a generic general purpose computer, which itself cannot generally serve as corresponding structure. *See Williamson,* 792 F.3d 1339, 1352 ("[T]his court has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor.")

Aside from arguing that the telecommunication network management system itself is structure (which it is not), WSOU points to extensive "exemplary" block cites and figures. *See* Opening Brief, at 12. WSOU does so without any explanation as to which of these, if any, are clearly linked to the claimed function. Not surprisingly, none of the specification sections or figures cited by WSOU actually identifies corresponding structures that are clearly linked to the claimed function.[11] Moreover, it is unclear whether WSOU asserts that the over two columns of

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10   For example, the only reference to a "telecommunication network management system" in the specification is the general statement that "from the above description, it is evidence how to obtain a telecommunication network management system, and the corresponding network, properly modified in order to include the operations provided by the method . . . ." '727 Patent, 4:56-59. However, this does not amount to the disclosure of an independent structural element that one of ordinary skill would understand.

11   For instance, the '727 Patent at 1:63-2:21 (cited by WSOU) generically copies the claim language and discusses the "basic idea" and objectives of the invention in functional language.

text from the '727 Patent cited by WSOU is, in its entirety, the corresponding structure, or if there is a particular section within the block citation that is meant to serve as the structure clearly linked to the claimed function. If the former, then it would appear to be WSOU's view the same structure is clearly linked to ***all*** of the claimed functions in both claims 4 and 5.

As opposed to WSOU's, Huawei's proposed construction properly identifies the algorithm of Figure 1 as the algorithm that the specification discloses as necessary to implement the Performance Monitoring function. Specifically, the '727 Patent provides that "the object of the present invention is to . . . indicate a method for implementing a Performance Monitoring PM function according to data that are retrieved through FEC, in a telecom network, which based upon the correlation of information relating to 'corrected' and 'uncorrected' information blocks deriving from the implementation of the FEC function." '727 Patent, 1:63-2:3. The only "method of implementation" disclosed in the specification is the method in Figure 1. *Id.,* 2:29-31 ("FIG. 1 illustrates a flow chart for the explanation of the calculation procedure of PM data which are the subject of the present invention."). Since only a single embodiment is disclosed in the specification, the means-plus-function claims must be limited to those structures. *Mettler-Toledo, Inc.,* 671 F.3d at 1296.[12] As such, the Court should adopt Huawei's proposed corresponding structure.

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[12]   The fact that the algorithm is provided in the form of a flow chart is irrelevant, as algorithms can be provided in any understandable terms that provide sufficient structure. *See Advanced Ground Information Sys., Inc. v. Life260, Inc.*, 830 F.3d 1341, 1349 (Fed. Cir. 2016) ("In the case of computer-implemented functions, [] the specification [must] disclose an algorithm for performing the claimed function. The specification can express the algorithm in any understandable terms including as a mathematical formula, in prose . . . as a flow chart, or in any other manner that provides sufficient structure." (quotation and citation omitted)).

C.   **"means for classifying said blocks either as corrected or uncorrected through the Forward Error Correction function" (claims 4, 5)**

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: network node performing Forward Error Correction function, and equivalents thereof

The parties agree that this term is governed by 35 U.S.C. § 112, ¶ 6, and that function is "classifying said blocks as either corrected or uncorrected through the Forward Error Correction function."[13] The parties disagree, however, whether there is a corresponding structure disclosed in the specification of the '727 Patent that is clearly linked to and accomplishes the agreed function. As will be shown below, there is not.

WSOU's contention that the corresponding structure is the "network node performing Forward Error Correction function," is incorrect for a number of reasons. As an initial matter, the portion of the specification to which WSOU refers is merely a list of definitions of primitives that "*can* be obtained" from the FEC function. '727 Patent, 2:45-47 (emphasis added). This portion of the specification says nothing about the function of "classifying said blocks." *See* Ex. 11, Sharma Declaration, at ¶¶ 32-33 Moreover, there is no disclosure regarding classifying blocks as *corrected or uncorrected through the Forward Error Correction function*. *See id.* at ¶¶ 32-34, 36-37 At best, WSOU's citation pertains to primitives or metrics that are "obtained" by the FEC end function. *See id.* ("The following primitives can be *obtained* from a FEC end function,

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[13]   WSOU argues in its Opening Brief that Huawei's claim of lack of corresponding structure "is erroneous at least because Defendants fail to identify any function." Opening Brief, at 12. This argument is a red herring. The function at issue is clearly listed in the corresponding claims, and there is no dispute over the claimed function for this means-plus-function term. The dispute here, which WSOU clearly wishes to avoid, is whether there is corresponding structure disclosed in the specification.

performed in the network node: CEC, corrected errors …") (emphasis added); *see also* Ex. 11, Sharma Declaration, at ¶ 33. This disclosure relates to the other "obtaining" limitations of claims 4 and 5. *See id* at ¶¶ 33-35; *see also* '727 Patent, claim 4, 6:5-7 ("means for **obtaining** data through the Forward Error Correction function carried out on the blocks of received data.") (emphasis added). Classifying data is a specific function within the limitations of claims 4 and 5, and nothing cited by WSOU relates to "classifying" the data obtained by the FEC function. *See* Ex. 11, Sharma Declaration, at ¶¶ 29-37. This is not surprising as nowhere other than the claims is the term "classifying," or any synonym, even used.

Given that there is no clear link to any structural component or algorithm in the specification for performing the claimed function, claims 4 and 5 of the '727 Patent are indefinite and invalid. *See id.,* at ¶ 37.

D. "means for calculating the Performance Monitoring function by implementing a correlation of the information regarding said correct and uncorrected blocks" (claims 4, 5)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: Algorithmic structure: $BER_{IN} = \Sigma BCE/(NSEC - \Sigma SCS)$, and equivalents thereof	Subject to 35 U.S.C. § 112, ¶ 6 Structure: telecommunication network management system, and equivalents thereof Algorithm (if required): *see e.g.*, 1:63-2:21, 2:36-4:54, Fig. 1, and equivalents

The parties agree that this term is governed by 35 U.S.C. § 112, ¶ 6, and that the function is "calculating the Performance Monitoring function by implementing a correlation of the information regarding said corrected and uncorrected blocks."[14] While the parties agree that there

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[14]   Huawei has revised its initial position regarding the function for this means-plus-function term and has adopted the claimed function proposed by WSOU.

is a "corresponding" structure disclosed in the specification that is clearly linked to and can accomplish the claimed function, the parties disagree about what that corresponding structure is. For the reasons explained in Section B above, and in the portions of Huawei's Responsive Brief discussing this same issue with regard to the '627 Patent (*see*'627 Patent, Section B, *supra*), WSOU's inclusion of structure from the preambles of claims 4 and 5 as the "corresponding structure" is legally improper and would create unsuitable claim redundancies. *See, e.g.,* '727 Patent, claim 4 ("*A management system of a telecommunication network, comprising* . . . means for calculating . . .") (emphasis added). Construing means-plus-function terms in such a manner is improper. *See Net MoneyIn*, 545 F.3d at 1366.

Aside from arguing that the "telecommunication network management system" itself is structure (which it is not), WSOU points to extensive "exemplary" block cites and figures. *See* Opening Brief, at 13. WSOU again does so without any explanation as to which, if any, are allegedly clearly linked to the claimed function. Not surprisingly, none of the specification sections or figures cited by WSOU actually identify corresponding structures that are clearly linked to the claimed functions.[15]

Further, WSOU's citation to Figure 1 is misplaced, as Figure 1 only discloses that SCS and BCE are counted, but fails to disclose how to calculate the Performance Monitoring function by *implementing a correlation* of the information regarding said corrected and uncorrected blocks. What's more, WSOU has identified the *exact same structure* for this function as it did for the means-plus-function term above Section B. Tellingly, WSOU provides no explanation for how the '727 Patent allegedly employs the same structure to perform two different functions.

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[15]   For instance, as noted above in Section B (incorporated herein by reference), the '727 Patent at 1:63-2:21 (cited by WSOU) generically copies the claim language and discusses the "basic idea" and objectives of the invention in functional language.

By comparison, Huawei's proposed corresponding structure includes the only algorithm in the specification that is capable of calculating the Performance Monitoring function by implementing a correlation of the information regarding said corrected and uncorrected blocks – namely, the BER_{IN} formula listed at column 3, line 21 of the '727 Patent ("$BER_{IN}=\sum BCE/(NSEC-\sum SCS$"). *See also id.*, 3:15-29 (stating that it is the BER_{IN} formula that allows for the calculation of Performance Monitoring data and the correlation between corrected and uncorrected blocks).[16] As such, the Court should adopt Huawei's proposed corresponding structure.

E.   "implementing a Performance Monitoring Function based on data retrieved through a Forward Error Correction Function" (claims 6, 7)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Function: implementing a Performance Monitoring function based on data retrieved through a Forward Error Correction function Structure: Algorithm disclosed in Figure 1, and equivalents thereof	Plain and ordinary meaning

"classifying said blocks either as corrected or uncorrected through the Forward Error Correction function" (claims 6 and 7)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Function: classifying said blocks either as corrected or uncorrected through the Forward Error Correction function Structure: Indefinite for failure to disclose corresponding structure	Plain and ordinary meaning

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[16]   Since only a single embodiment is disclosed, the means-plus-function claims must be limited to those structures. *See Mettler-Toledo*, 671 F.3d at 1296.

The parties' dispute for these terms centers on whether or not these claims limitations should be construed as means-plus-function claims pursuant to 35 U.S.C. § 112, ¶ 6, and if so, whether and what the corresponding structure is. Admittedly, these terms do not include the term "means," are thus are subject to a rebuttal presumption that they are not means-plus-function limitations. *See Williamson*, 792 F.3d 1348. Importantly, *Williamson* abrogated prior law that the absence of the word "means" gives rise to a "strong" presumption against means-plus-function treatment. *See id.* The presumption can now be overcome and § 112, ¶ 6 will apply if "the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'" *Id.* (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

WSOU relies upon cases decided prior to the *Williamson* decision and prior to the abrogation of the "strong" presumption against means-plus-function treatment. *See* Opening Brief, at 15-16.[17] Moreover, and contrary to WSOU's contentions, computer-readable medium storages devices amount to nothing more than a general-purpose computer and do not, by themselves, connote sufficient structure. *See Rain Computer, Inc.*, Case No. 20-1646, Dkt. No. 45 at 8-9 (finding that "computer-readable media or storage devices amount to nothing more than a general-purpose computer" and that as a result disclosure of an algorithm is required).

The claims at issue here contain no memory, no processor, include "program code" only in the preamble, and provide no substantial detail on the programmable instructions beyond the

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[17]   Notably, the case which WSOU cites regarding "program code" connoting specific structure included "memory" with "program code that includes instructions executed by [a] processor," and "program code executable by the processor," *all in the claim and not the preamble* and further included "substantial detail regarding instructions included in the program code." *Virginia Innovation Sciences, Inc. v. Amazon.com Inc.*, 2019 WL 4259020, *30-*32 (E.D. Tex. Sep. 9, 2019).

pure functional language recited above. As has been noted since *Williamson*, regardless of the claim type, style, or structure, the proper analysis is whether one of ordinary skill in the art would understand a claim written with functional language, in the context of the specification, to denote sufficiently definite structure or acts for performing the function. *See Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015).

Here, the claim terms at issue are too generalized and recite purely functional language. Notably, other than the format of the preamble, claims 6 and 7 are nearly identical to claims 4 and 5 of the '727 Patent – the only difference is the inclusion of the word "means" in each of the corresponding limitations of claims 4 and 5. *Compare* '727 Patent, 5:66-6:46 *with* 6:47-8:11. In each of claims 4 and 5, there is no additional information, detail, or structure identified in the claim limitations themselves. Thus, removing the word "means" from the ***undisputed*** means-plus-function limitations from claims 4 and 5 and including only the verbatim functional language in claims 6 and 7 ***should not change the character of the relevant claim limitations***. This failure to recite sufficient structure for performing the claimed functions lands these claims limitations squarely within the bounds of § 112, ¶ 6. *See Williamson*, 792 F.3d at 1351.

Should the Court find that these claim limitations are subject to 35 U.S.C. §112, ¶ 6, then Huawei's arguments regarding the corresponding structure for these terms (or lack thereof) is the same as those above in Sections C and D, above. *See* Ex. 11, Sharma Declaration, at ¶ 38.

III.   U.S. Patent No. 7,508,755 ("the '755 Patent") (Case No. 6:20-cv-00535)

A.   "originating network device" (claims 1, 3, 20)

Huawei's Proposed Construction	WSOU's Proposed Construction
"a network device of a primary LSP which is not a source network device of the same primary LSP"	Plain and ordinary meaning

Huawei's proposed construction of "originating network device" is directly supported by the intrinsic record and the '755 Patent's distinction regarding the function of different components within a network. In contrast, WSOU's contention that this term should be afforded its "plain and ordinary meaning" ignores the clear teachings of the specification regarding the scope of the alleged invention.[18] Huawei's proposed construction should thus be adopted.

According to the specification, the alleged invention of the '755 Patent is directed to the re-routing of traffic within MPLS networks. *See, e.g.,* '755 Patent, 2:7-10 ("FIG. 1 is a simplified block diagram showing an MPLS network which includes elements capable of re-routing bi-directional LSP traffic upon detection of a failure ***in accordance with the present invention.***") (emphasis added); *see also Pacing Techs., LLC v. Garmin Int'l, Inc.,* 778 F.3d 1021, 1024 (Fed. Cir. 2015) (where the specification describes the "present invention" in a specific manner, such statements constitute "clear and unmistakable statements by the patentee that limit the claims."). This fact is bolstered by the specification's consistent and repeated reference to LSPs, which are pathways only present in MPLS networks. In all disclosed embodiments, the specification distinguishes the different network devices within a system, including differentiating the originating network device, merging network device, and source network device. *See* '755 Patent*,* 1:12-14. ("[a] conventional LSP begins at a source network device, passes through intermediate network devices, and ends at a destination network device."); 2:39-42 ("The process depicted in FIG. 2 is used to first identify an originating network device which is not a source node and, second, to set up an alternate path between the originating network device and a merging network device"); 2:61-3:4 (teaching that the control processing section must make a determination if the

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[18]   WSOU's argument that the "claim language itself provides a definition of this term" (Opening Brief, at 18), fails. The claim language describes what the "originating network devices" *does*, but not what it *is* (i.e., what network device it is within the network).

network device is an originating network device or a source network device because if the device is a source network device, then the alternate pathway cannot be created).

In Figure 1, which the patent defines as "the present invention," for example, the "originating network device" is the network device 120 situated immediately before the point of failure, which is distinct from the source network device 110 of the primary bi-directional LSP 100. *Id.,* Fig. 1; 1:61-64 and 2:7-10 ("FIG. 1 is a simplified block diagram showing an MPLS network 105 which includes elements capable of re-routing bi-directional traffic upon detection of a failure in accordance with the present invention.") However, the signal has to pass through other system devices before it reaches the originating network device. *See id.,* Fig. 1 (indicating packet and information flow sourced prior to device 110 and prior to the information flow arriving at originating device 120).

As yet another example, the specification explains that the source network device and originating network device in Figure 2 are distinct from one other. *See id.,* 2:39-42 ("The process depicted in FIG. 2 is used to first identify an originating network device which is not a source node and, second, to set up an alternate path between the originating network device and a merging network device."). The '755 Patent goes further, however, distinguishing a "conventional LSP," which "begins at a source network device," and explaining how current MPLS Fast Re-routing operations are "deficient." *Id.,* 1:7-44. In explaining the purpose and benefits of the invention, the Patent distinguishes these "conventional LSPs" from the Patent's "bi-directional LSP[s]," which allow for the rerouting of "traffic traveling in both directions from a bi-directional LSP to an alternate path using the same network elements." *Id.,* 1:47-49. These statements necessarily limit the scope of the '755 Patent to MPLS networks. *See e.g., Regents of Univ. of Minn. v. AGA*

Med. Corp., 717 F.3d 929, 936 (Fed. Cir. 2013) (finding patent claims limited due to representations of what the claimed invention is).[19]

WSOU argues that Huawei's proposed construction would limit the disputed term to only certain disclosed embodiments based on a statement in the specification that only "exemplary embodiments" are disclosed therein. Opening Brief, at 19. However, other than this generic language, WSOU can point to no embodiment from the specification that would be omitted by Huawei's proposed construction, as all of the descriptions in the intrinsic record draw a distinction between the source and originating network devices. In such situations, it is entirely proper for a court to limit the scope of the invention consistent with the invention disclosed in the specification. *See, e.g., On Demand Mach. Corp. v. Ingram Indus.*, 442 F.3d 1331, 1340 (Fed. Cir. 2006) ("[C]laims cannot be of broader scope than the invention that is set forth in the specification.").

B.   "switch over message" (claims 1, 5, 8, 10, 13, 16, 18, 20, 23, 25)

Huawei's Proposed Construction	WSOU's Proposed Construction
"a message which instructs a device to perform a switch over to the alternate path and which is not a message that indicates a fault has occurred in the network"	Plain and ordinary meaning

Huawei's proposed construction reflects this term's consistent use throughout the intrinsic record. By comparison, WSOU's proposed construction of "plain and ordinary meaning" ignores the unequivocal disclaimers made by the patent applicant during prosecution, and is a classic example of arguing one thing to get a patent allowed in the face of a PTO rejection, and subsequently arguing the opposite when asserting the claims against an alleged infringer. WSOU

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19   Indeed, WSOU's reference to a quote from the specification describing "*existing* MPLS Fast Re-routing techniques" (Opening Brief, at 19) (emphasis added), supports Huawei's construction by demonstrating that the techniques described were designed to apply to those MPLS networks that existed at the time.

is well aware that this kind of conduct is prohibited. *See* Opening Brief, at 4; *see also Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001) ("[a] patent may not, like a 'nose of wax,' be twisted one way to avoid [invalidity] and another to find infringement." (citation omitted)).

The specification of the '755 Patent repeatedly instructs that the claimed "switch over message" is "a message which instructs a device to perform a switch over to the alternate path." *E.g.,* '755 Patent, 1:54-57 ("to transmit a switch over message along the alternate path in the forward direction to a network device responsive for re-routing traffic . . ."); 2:11-25 (explaining that upon the detection of a network failure, a switch over message is used to create alternate pathways); 2:52-60 (disclosing that the switch over message is used by network devices to switch traffic to the alternate path, and that a switch over is only performed after receiving the switch over message).

In addition, the prosecution history reveals that the claimed switch over message *cannot* be a fault detection message. Prosecution disclaimer attaches to a term "where a patentee unequivocally disavowed a certain meaning to obtain his patent." *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed Cir. 2003). The doctrine narrows the meaning of the claim congruent with the scope of the surrender. *Id.*

In this case, in order to overcome numerous rejections from the PTO, the applicant consistently represented (from the applicant's response to the first office action, through the response to the last office action, and finally through the appeal briefs) that the claimed "switch over message" is distinct and separate from a message indicating that a fault has occurred in the network. *See e.g.,* Ex. 3, "Appl. Ser. No. 10/613,103, 06/27/2007 Amendment," at 10 (distinguishing the Carpini prior art reference and explaining that "[t]he excerpts cited in the Office

Action (paragraph 47, lines 15-19) appear to relate to the detection of a 'fault indication' message, not a switch-over message. The former relates to fault detection; the latter relates to the re-routing of traffic along an alternative, bi-directional LSP in a backwards direction."); Ex. 4, "Appl. Ser. No. 10/613,103, 11/18/2007 Amendment," at 9-10 ("Carpini does not disclose a switch-over message that is used to re-route traffic. The excerpts cited in the Office Action . . . appear to relate to the detection of a 'fault detection' message, not a switch-over message. ... In sum, the switch-over message does not identify a fault; rather it is used by a merging network device to re-route traffic. It is, therefore, unreasonable to interpret a fault indication message as a switch-over message."); Ex. 5, "Appl. Ser. No. 10/613,103, 03/25/2008 Amendment," at 10-11 (distinguishing Carpini because it is "capable of detecting diverting data and routing it back to a primary path without using a switch-over message" and because "the Examiner's interpretation of the terms 'divert' or 're-routing' as used in Carpini as having the same or similar meaning as the claimed switch-over message is unreasonable.").

In view of these repeated and unequivocal statements, the applicant disavowed any claim construction (such as the present "plain and ordinary meaning") where the "switch over message" could include messages that indicate that a fault has occurred in the network. *See Computer Docking Station Components, Inc. v. Dell, Inc.*, 519 F.3d 1366, 1379 (Fed. Cir. 2008) (finding disavowal of claim scope where "the sum of patentee's statements during prosecution would lead a competitor to believe that the patentee had disavowed coverage of laptops"); *Seachange Int'l, Inc. v. C-Cor, Inc.*, 413, F.3d 1361, 1373 (Fed. Cir. 2005) (finding disclaimer where the applicant argued during prosecution that "illustrative" claim did not disclose features of prior art); *Springs Window Fasions LP v. Novo Inudstries, L.P.*, 323 F.3d 989, 996 (finding disclaimer where the

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applicant made consistent and repeated arguments distinguishing the prior art from the claimed

invention).

Only Huawei's construction of "switch over message" is consistent with the intrinsic

evidence, aligning with both the definition provided in the specification and the express disclaimer

from the patent applicant during prosecution.   Accordingly, Huawei's proposed construction

should be adopted by the Court.

C. **"means for re-routing . . . in a backwards direction" terms (claims 8, 23, 25)[20]**

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Structure: Indefinite for failure to disclose sufficient corresponding structure	Subject to 35 U.S.C. §112, ¶ 6 Structure: merging network device, and equivalents thereof Algorithm (if required): *see e.g.,* 2:7-32, 2:43-60, 3:13-36, Figs. 1, 2, 3

The parties agree that these means-plus-function terms are governed by 35 U.S.C. § 112, ¶

6, and agree that the claimed functions are as listed by WSOU in its Opening Brief (at 20).   The

parties dispute, however, whether there is a corresponding structure disclosed in the specification

that is clearly linked to and accomplishes the claimed functions.   As a result, the Court must

ascertain whether there is a "corresponding structure" identified in the '755 Patent's specification

that corresponds to the claimed functions. *See Williamson,* 792 F.3d at 1352.   The "structure

disclosed in the specification is 'corresponding' structure only if the specification or prosecution

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[20]   WSOU identifies two means-plus-function terms in its Opening Brief and contends that those are terms with "Constructions Not Contested by Defendants." Opening Brief, at 18. While Defendants chose not to brief those terms given the limits imposed by the Court and OGP 3.2, Defendants contend that WSOU's identification of structure is incorrect for reasons similar to those identified in this Section.

history clearly links or associates that structure to the function recited in the claim*." B. Braun Med., Inc.*, 124 F.3d at 1424.

Because there is no structural component or corresponding algorithm disclosed in the specification that is clearly linked to and accomplishes the claimed functions above, claims 8, 23, and 25 of the '755 Patent are indefinite, and therefore invalid. *See* Ex. 2, Lavian Declaration, at ¶ 75; *see also Williamson*, 792 F.3d at 1351-52. WSOU's contention that the merging network device constitutes sufficient structure is incorrect for the same reasons described above with regard to the '627 Patent (*see*'627 Patent, Section B, *supra*) – namely, because the merging network device is not linked in the specification as the "means" for re-routing traffic, but rather is identified as "comprising" those means in the claims. *See, e.g.,* '755 Patent, claims 8 and 23 (claiming a "merging network device ***which comprises means for*** . . . re-routing traffic . . . in the backwards direction.") (emphasis added). This type of proposed construction is improper. *See Net MoneyIn, Inc.*, 545 F.3d at 1366. In addition, it is notable that the term "merging network device" is not defined within the specification, and is not defined by any extrinsic evidence provided by WSOU. The end result is then that the term "merging network device" is akin to a generic general purpose computer, which itself cannot generally serve as corresponding structure. *See* Ex. 2, Lavian Declaration, at ¶¶ 76-78; *see also Williamson*, 792 F.3d at 1352.

WSOU fails to cite to any specific structural components or algorithms of the merging network device that are clearly linked to the claimed functions above. And none of the block cites WSOU includes in its Opening Brief clearly link structure to the recited function. *See* Opening Brief, at 21. *See* Ex. 2, Lavian Declaration, at ¶¶ 74-87. For example, the'755 Patent at 2:7-32 (cited by WSOU) merely describes the high-level ***function*** of re-routing bi-directional LSP traffic upon detection of a failure without disclosing any specific structures or algorithms that perform

the identified functions of claims 8, 23, and 25. *See* Ex. 2, Lavian Declaration, at ¶ 81 . In addition, the passage at 2:43-60 discusses functionality of the ***originating network device*** rather than WSOU's purported structure of the merging network device. WSOU's other citations are equally problematic. *See* Ex. 2, Lavian Declaration, at ¶ 82. In sum, none of the citations to the '755 Patent identified by WSOU – including 3:13-36 or Figs. 1, 2, or 3 – recite sufficient structure clearly linked to the claimed functions. *See* Ex. 2, Lavian Declaration, at ¶¶ 80-87.

Given that there is no clear link to any structural component or algorithm in the specification for performing the recited functions above, claims 8, 23, and 25 are indefinite.

D.   **"means for re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claims 20, 25)**

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: originating network device and equivalents thereof Algorithm (if required): *see, e.g.,* 1:51-56, 2:7-32, 2:43-60, Figs. 1, 2, 3

The parties again agree that this a means-plus-function term governed by 35 U.S.C. § 112, ¶ 6, and agree that the corresponding function is "re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction." The parties again dispute, however, whether there is corresponding structure disclosed in the specification of the '755 Patent that is clearly linked to and accomplishes the agreed to function.

WSOU's contention that the "originating network device" from the preambles of the respective claims constitutes corresponding structure is improper for the reasons explained in Sections B and C, above. *See also* '755 Patent, claim 20 (claiming an "***originating network device***

comprising . . . means for re-routing traffic . . . in a forward direction.") (emphasis added); *Net MoneyIn, Inc.*, 545 F.3d at 1366 (Fed. Cir. 2008).   As before, WSOU fails to cite to any specific structural components or algorithms that comprise the "originating network device." *See* Ex. 2, Lavian Declaration, at ¶¶ 88-101. In addition, it is notable that the term "originating network device" is not defined within the specification, nor is it defined by any extrinsic evidence provided by WSOU. Moreover, WSOU does not claim that the term has a generally understood meaning in the art. The end result is that, at best, the term "originating network device" is akin to a generic general purpose computer, which itself cannot generally serve as corresponding structure. *See* Ex. 2, Lavian Declaration, at ¶¶ 88-93; *see also Williamson*, 792 F.3d at 1352.

As it did for the disputed terms above, rather than identify any specific structure of the "originating network device" (as there is none), WSOU simply includes multiple block cites from the specification that WSOU contends are relevant "to the extent an algorithm is required." Opening Brief, at 22. However, once again, none of the sections cited by WSOU identify corresponding structures or algorithms clearly linked to the claimed function. *See* Ex. 2, Lavian Declaration, at ¶¶ 88-101 . For example, the '755 Patent at 1:51-56 and 2:7-32 (cited by WSOU) merely describes the high-level ***functions*** of the originating network device and of re-routing bi-directional LSP traffic upon detection of a failure without disclosing any specific structures or algorithms that perform the identified functions of claims 20 and 25. *See* Ex. 2, Lavian Declaration, at ¶¶ 95-96. WSOU's other citations are equally problematic, and fail to recite sufficient structure clearly linked to the claimed function. *See* Ex. 2, Lavian Declaration, at ¶¶ 94-101. As such, claims 20 and 25 are indefinite and invalid.

E.   **"means for transmitting a switch over message along the alternate path in the forward direction to a merging network device responsible for re-routing traffic traveling along the bi-directional LSP in a backward direction to the alternate path in the backward direction" (claim 20) /**

"means for transmitting a switch over message, along the alternate path in the forward direction, for re-routing traffic traveling along the bi-directional LSP in a backwards direction" (claim 25)

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. § 112, ¶ 6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: originating network device, and equivalents thereof Algorithm (if required): *see, e.g.,* 1:51-56, 2:7-32, 2:43-60, 3:9-36, Figs. 1, 2, 3

The parties agree that these means-plus-function terms are governed by 35 U.S.C. § 112, ¶ 6, and that the claimed are as identified in WSOU's Opening Brief (at 23). The parties dipute, however, whether there is corresponding structure disclosed in the specification of the '755 Patent that is clearly linked to and accomplishes the claimed functions.

As explained above with regard to the '627 Patent (*see*'627 Patent, Section B, *supra*), WSOU's contention that the "originating network device" from the preambles of the claims themselves constitutes sufficient structure is improper and contrary to long-established Federal Circuit precedent. *See, e.g.,* 755 Patent, claim 20 (claiming an "***originating network device comprising*** . . . means for transmitting a switch over message . . . .") (emphasis added); *see also Net MoneyIn, Inc.*, 545 F.3d at 1366 (Fed. Cir. 2008). In addition, it is notable that the term "originating network device" is not defined within the specification, not defined by any extrinsic evidence provided by WSOU, and WSOU does not claim that the term has a generally understood meaning in the art. The end result is again that the term "originating network device" is akin to a generic general purpose computer, which itself generally cannot serve as corresponding structure.

See Ex. 2, Lavian Declaration, at ¶¶ 102-107; *see also Williamson*, 792 F.3d at 1352.

WSOU further fails to cite to any specific structural components or algorithms in the "originating network device" that are clearly linked to the claimed functions. *See* Ex. 2, Lavian Declaration, at ¶¶ 102-117. For example, the '755 Patent,1:51-56 and 2:7-32 (cited by WSOU, *see* Opening Brief, at 23-24) describes the high-level *functions* or the originating network device and of re-routing bi-directional LSP traffic upon detection of a failure without disclosing any specific structures or algorithms that perform the identified functions of claims 20 and 25. *See* Ex. 2, Lavian Declaration, at ¶¶ 110-111. WSOU's other citations are equally unavailing and fail to recite structure clearly linked to the claimed function. *See* Ex. 2, Lavian Declaration, at ¶¶ 112-117 . Given that there is no clear link to any structural component or algorithm in the specification for performing the recited functions above, claims 20 and 25 are indefinite and therefore invalid.

F.   **"means for means for [sic] receiving traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction" (claim 23)**

Huawei's Proposed Construction	WSOU's Proposed Construction
Subject to 35 U.S.C. §112, ¶6 Structure: Indefinite for failure to disclose corresponding structure	Subject to 35 U.S.C. § 112, ¶ 6 Structure: merging network device and equivalents thereof Algorithm (if required): *see, e.g.,* 2:7-32, 2:43-60, 3:13-36, Figs. 1, 2, 3

The parties again agree that this means-plus-function term is governed by 35 U.S.C. § 112, ¶ 6, and that the function is "re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction." The parties again dispute, however, whether there is corresponding structure disclosed in the specification of the '755 Patent that is clearly linked to and accomplishes the agreed to function.

As explained with regard to the preceding terms, WSOU's argument that the "merging network device" from the preamble of the claim constitutes corresponding structure is improper. *See, e.g.,* 755 Patent, claim 23 (claiming a "***merging network device comprising*** . . . means for receiving traffic.") (emphasis added); *see also Net MoneyIn, Inc.*, 545 F.3d at 1366 (Fed. Cir. 2008). In addition, the term "merging network device" is not defined within the specification, is not defined by any extrinsic evidence from WSOU, and WSOU does not claim that the term has a generally understood meaning in the art. The end result is again that the term "merging network device" is akin to a generic general purpose computer, which itself generally cannot serve as corresponding structure. *See* Ex. 2, Lavian Declaration, at ¶¶ 119-124; *see also Williamson*, 792 F.3d at 1352.

As before, none of the litany of block citations included in WSOU's Opening Brief (*see* Opening Brief, at 24-25) disclose specific structural components or algorithms of the "merging network device" that are clearly linked to and can accomplish the claimed function. *See* Ex. 2, Lavian Declaration, at ¶¶ 125-132. For example, the 755 Patent at 2:7-32 (cited by WSOU) merely describes the high-level ***function*** of re-routing bi-directional LSP traffic upon detection of a failure, without disclosing any specific structures or algorithms that perform the identified function of claim 23. *See* Ex. 2, Lavian Declaration, at ¶ 126. In addition, the passage at 2:43-60 discusses functionality of the ***originating network device*** rather than WSOU's purported structure of the "merging network device." *See* Ex. 2, Lavian Declaration, at ¶ 127. WSOU's other citations are equally unavailing, and fail to recite structure clearly linked to the claimed function. *See* Ex. 2, Lavian Declaration, at ¶¶ 128-132 . As such, claim 23 is indefinite and invalid.

IV.   **U.S. Patent No. 8,417,112 ("the '112 Patent") (Case No. 6:20-cv-00540)**

The '112 Patent is directed a switching method/apparatus having "improved accuracy in monitoring a network to determine ***when to switch***" to avoid faulty communication links by

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preventing a switch from being triggered by transient BERs because transient BERs would cause unnecessary re-routing of traffic within the network. '112 Patent, Abstract (emphasis added) and 4:3-17. In particular, a BER hysteresis algorithm is provided to determine BER degradation and when to switch as shown below. *See id.,* Fig. 3. To prevent a switch of transmission port from being triggered by transient BERs (a momentary increase of the BER due to various events, such as a movement of an optical fiber, some power fluctuation, *etc*.), the BER hysteresis algorithm requires "monitor[ing] BER values and comparing the most current BER values with older BER values" (e.g., steps 318, 320) to determine whether the collected BERs really worsen over time *after/in response to* determining a certain number of BERs have exceeded a threshold (e.g., steps 310, 312, 314). *See id.,* 1:49-59; 4:3-12; 5:12-49; and Fig. 3.

A.   **"determining whether said collected BER values worsen over time" (claims 1, 11)**

Huawei's Proposed Construction	WSOU's Proposed Construction
"determining whether said collected BER values worsen over time by comparing one or more of said recent ones of said collected BER values with said other collected BER values"	Plain and ordinary meaning

The term "determining whether said collected BER values worsen over time" appears in claims 1 and 11 as part of the limitation "in response to a determination that each of said recent ones of said collected BER values exceeds the predetermined BER threshold level, determining whether said collected BER values worsen over time." The Court should construe this term as the meaning is vague and is not commonly known to a person of ordinary skill in the art. Moreover, the Court should construe this term in light of the disavowal of claim scope by the patent applicant during prosecution related to this term. Huawei's proposed construction should be adopted by the

Court as it is consistent with the disavowal of claim scope by the patent applicant during prosecution related to this limitation.

> ### i. The Patent Applicant Disavowed the Full Scope of the Claim Term During Prosecution by Specifying that the "Determining" as Claimed is an Affirmative Step by Comparing the Collected BER Values

During prosecution of the application that would eventually issue as the '112 Patent, the patent applicant filed an Appeal Brief from the third final Office Action.[21] In that Office Action, the patent examiner had concluded that the Vieregge prior art reference discloses the above-referenced limitation because Vieregge discloses triggering a switch of a transmission port upon bit error rate (BER) values deteriorating to a certain level (e.g., two BER thresholds are crossed in a short enough period of time, or a rate of increase between two BER measurements exceeding some value, etc.). *See* Ex. 6, "Appl. Ser. No. 10/448,559, 11/19/2008 final Office Action," at 2, 10-12. The examiner had determined that BER deterioration indicates that the BER values have been determined to worsen over time, and so "otherwise why bother to switchover." Ex. 7, "Appl. Ser. No. 10/448,559, 11/09/2009 Examiner's Answer," at 13-14, 19. In response, the patent applicant explicitly rejected that such an "indication" can meet the above-identified limitation. *See generally*, Ex. 8, "Appl. Ser. No. 10/448,559, 09/09/2008 Office Action response," Ex. 9, "Appl. Ser. No. 10/448,559, 04/13/2009 Appeal Brief" and Ex. 10, "Appl. Ser. No. 10/448,559, 09/02/2009 Reply Brief". Specifically, the patent applicant stated that "if two thresholds are crossed in a short enough period of time, then the decision to instigate protection switching is made . . . does not teach or suggest" the above-referenced limitation. Ex. 9, "Appl. Ser. No. 10/448,559, 04/13/2009 Appeal Brief," at 17.

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[21]   The patent examiner issued eight substantial rejections (including non-final and final Office Actions and Examiner's Answer to an Appeal Brief) during a prosecution that lasted for over ten years.

In order to secure allowance of the '112 Patent, the patent applicant further clarified that "determining whether said collected BER values worsen over time" cannot be merely "indicated" by BER deterioration, but is rather an affirmative step that should be performed by comparing collected BER values (step 318) after/in response to determining that recent ones of said collected BER values exceed a predetermined BER threshold level (step 314) according to the flow chart in Fig. 3. *See* Ex. 9, "Appl. Ser. No. 10/448,559, 04/13/2009 Appeal Brief," at 15 (excerpt as shown and annotated below).

> depicted in Figure 3 of Appellant's originally-filed application, after the value of the FLAG counter is greater than two (see step 314), which indicates that the three most recent BER values (of the ten most recently collected BER values) each exceed a BER threshold, the ten collected BER values are compared to determine if the ten collected BER values worsen over time (see step 318). In other words, when each of a plurality of recent BER values, which are a subset of a larger set of collected BER values, exceeds a BER threshold, a determination is made as to whether the larger set of collected BER values worsens over time. By contrast, as described hereinabove, Vieregge merely discloses determining if the latest BER value exceeds a threshold and determining that a rate of increase between two consecutive measurements must exceed some value, or determining if two thresholds are crossed in a short enough period of time. Vieregge fails to teach or suggest determining whether a set of collected BER values worsen over time, in response to a determination that each of a plurality of BER values in a subset of that set of collected BER values exceeds a BER threshold.

The patent applicant further explicitly confirmed that "Figure 3, 314, 318, 320; Pg. 8, Lines 5-30 [of the originally-filed application]" are associated with the current limitation. Ex. 9, "Appl. Ser. No. 10/448,559, 04/13/2009 Appeal Brief," at 8. The portion indicated by the patent applicant (reproduced below) provides the only enabling method as to how to determine whether said collected BER values worsen over time. *See Medicines Company v. Mylan, Inc.,* 853 F.3d 1296,

1309 (Fed. Cir. 2017) (holding that the claims are limited to a single embodiment when that is the

only enabling description provided in the specification).

> At step 318, the method 300 compares the BER value stored in address 202_3 with the BER values stored in addresses 202_4-202_{10}; the BER value stored in address 202_2 with the BER values stored in addresses 202_3-202_{10}; and the BER value stored in address $202_{[1]}$, with the BER values stored in addresses 202_2-202_{10}. At step 320, the method 300 determines whether the BER values worsen over time. Upon an affirmative determination that the BER values worsen over time, the method 300 proceeds to step 328.

'112 Patent, 5:34-46. Thus, Applicant disavowed any claim to the "plain and ordinary meaning"

for this disputed term in question when it made the statements above to secure allowance of the

'112 Patent. *See Poly-America, L.P. v. API Industries, Inc.,* 839 F.3d 1131, 1136 (Fed. Cir. 2016)

("Disavowal can be effectuated by language in the specification or the prosecution history.")

Huawei's proposed construction thus reflects the true scope of the current term in view of the

prosecution history and specification.

ii.   Huawei's Proposed Construction Accords with the Specification and Claim Language and is Not Duplicative or Confusing

The affirmative step of determining whether said collected BER values worsen over time

as argued by the patent applicant is the crux of the alleged invention of the '112 Patent. The '112

Patent recognizes an issue of "transient BERs" where "various events occur which cause a

momentary increase of the BER," and so requires such an additional step to ensure a switch would

not be triggered solely by a BER threshold being exceeded momentarily. *See* '112 Patent, 4:3-9

("These transient BERs cause unnecessary re-routing of traffic within the network 100. . . One

way to prevent transient BERs is to monitor BER values and compare the most current BER values

with older BER values.")   Accordingly, the specification teaches an array for storing and

comparing collected BERs to determine when to switch. *See id.,* Figs. 2-3 and 4:12-47 ("FIG.

2 depicts an embodiment of an array 200 having ten addresses 202_1-202_{10} (collectively addresses 202). FIG. 3 depicts a flow diagram of a method of utilizing the array").

In its Opening Brief, WSOU argues that "Defendant's additional recitation in their proposal is confusing, as it simply states that some value(s) should be compared with other value(s), but that concept is already included in the term itself." Opening Brief, at 26. Not so. The "recent ones of said collected BER values" as recited in Huawei's proposed construction are not merely "some values" as asserted by WSOU. Instead, in view of the claim language, "recent ones of said collected BER values" are the collected BER values that exceed the predetermined BER threshold level. *See* '112 Patent, claims 1 and 11 ("in response to a determination that each of said recent ones of said collected BER values exceeds the predetermined BER threshold level"). Therefore, Huawei's proposed construction is not confusing or duplicative.

WSOU further argues that "it is unclear how comparing merely one recent value can show 'worsen over time.'" Opening Brief, at 27. WSOU's claim of ignorance is belied by the disclosures of the '112 Patent itself. For example, if there are ten BER values being collected: BER_1 (recent one) through BER_{10}, and BER_1 is determined to be worse than BER_2 through BER_{10}, it can be determined that BER values *worsen over time*. *See* '112 Patent, 5:40-42. As such, and based on the clear disavowal of claim scope by the patent applicant as outlined above, the Court should adopt Huawei's proposed construction.

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Respectfully submitted,

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<u>CERTIFICATE OF SERVICE</u>

I hereby certify that all counsel of record who are deemed to have consented to electronic

service are being served with a copy of this document via the Court's CM/ECF system.

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/s/ Jason W. Cook
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